

USFWS policy (step-down procedure) also emphasizes avoidance and minimization. However, for unavoidable losses, the USFWS recommends that mitigation efforts be based on the value and scarcity of the habitat at risk.

The NCDOT policy stresses that all practicable measures should be taken to avoid or minimize harm to wetlands, which will be affected by federally funded highway construction. A sequencing (step-down) procedure is recommended in the event that avoidance is impossible. Mitigation employed outside of the highway right of way must be reviewed and approved on a case-by-case basis.

### **3. Mitigation Evaluation**

**Avoidance** – Jurisdictional stream and wetland areas are present within the project study area and will be impacted by the proposed project. Efforts have been and will continue to be made throughout the Project Development process to avoid impacts to the greatest extent practicable. It is not possible for the proposed project (Alternative E) to avoid all impacts to jurisdictional areas, due to the location of Needmore Road and design constraints. However, the proposed project avoids direct impact to the Little Tennessee River.

**Minimization** – Impacts to natural environment features in the project area have been avoided and minimized through selection of the recommended alignment for the project. Minimization was achieved by widening away from the river and steepening cut slopes in rocky areas. Stream crossings and impacts were maintained as perpendicular where possible. Avoidance and minimization efforts on the project will be summarized and presented in detail to the merger team at a Concurrence Point 4A meeting.

**Compensatory mitigation** - The need for compensatory mitigation is likely due to the size and location of the jurisdictional streams within the project study area. Mitigation will likely be required for stream impacts greater than 150 linear feet. A specific mitigation plan cannot be developed until final design is completed and final impacts are determined.

The NCDOT will investigate potential on-site stream mitigation opportunities based on the recommended alternative. If on-site mitigation is not feasible, mitigation will be provided by North Carolina Department of Environment and Natural Resources Ecosystem Enhancement Program (EEP). In accordance with the “Memorandum of Agreement Among the North Carolina Department of Transportation, and the U.S. Army Corps of Engineers, Wilmington District” (MOA), July 22, 2003, the EEP will be requested to provide off-site mitigation to satisfy the federal Clean Water Act compensatory mitigation requirements for this project.

## **F. Protected Species Issues**

### **1. Federal Protected Species**

Species with the federal classification of Endangered (E), Threatened (T), or officially Proposed (P) for such listing, are protected under the Endangered Species Act (ESA) of 1973 (16 USC 1531 *et seq.*), as amended. **Table 18** presents the federal protected species listed for Macon and Swain Counties (USFWS 2008). Descriptions of these federally protected species along with habitat requirements and biological conclusions for this project are presented following the table.